

**PREPARATION OF PARTICLES BY HYDROLYSIS OF A METAL  
CATION IN THE PRESENCE OF A POLYMER**

Abstract

A subject matter of the present invention is a process for the preparation of particles comprising at least one metal ion which comprises the following stages:

- a) at least one precursor comprising a metal cation is dissolved or dispersed in an aqueous medium;
- b) a partial hydrolysis of said precursor is optionally carried out,
- c) the precursor resulting from stage a) or the partially hydrolyzed precursor resulting from stage b) is brought into contact with at least one water-soluble comb copolymer comprising either a complexing anionic backbone and stabilizing hydrophilic side chains or a stabilizing neutral backbone and complexing anionic hydrophilic side chains or at least one of the two abovementioned copolymers in combination with at least one complexing anionic hydrophilic polymer;
- d) a partial or complete hydrolysis of the product obtained during stage c) is carried out.

Likewise, a subject matter of the invention is the particles capable of being prepared according to the process of the invention, said particles exhibiting a mean size of between 2 and 500 nm and preferably

between 2 and 300 nm. Finally, it relates to the use of such particles in the mechanical polishing of hard objects, in the preparation of pigments or mixed ceramics for the electronics industry, in the reinforcing of polymeric matrices, in fungicidal or biocidal dispersions, in the scavenging of sulfur derivatives or in the scavenging of unpleasant smells.